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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/751,455	01/06/2004	Larry Dancey	3343-23	2360

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EXAMINER
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PHAM, MINH CHAU THI

ART UNIT	PAPER NUMBER
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1724

DATE MAILED: 08/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/751,455

Applicant(s)

DANCEY ET AL.

Examiner

Minh-Chau T. Pham

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 09 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-44 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-44 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-5, 8-13, 19-27, 31, 34-37 and 40-44 are rejected 35 U.S.C. 103(a) as being unpatentable over Eller et al (5,004,483), in view of either Kitano et al (5,944,894) or Belding et al (5,660,048).

Eller et al disclose a method of controlling relative humidity of inside an enclosed space (10) comprising the step of drawing outside air to the enclosed space to create an air stream discharging into the enclosed space (col. 7, lines 20-21 and line 68 through col. 8, line 2), sensing the relative humidity of the air in at least one sensing location (col. 8, lines 28-38, col. 9, lines 60-67), means for controlling relative humidity and temperature to maintain a desired relative humidity (col. 8, lines 35-37). Eller et al further disclose the step of maintaining the desired relative humidity by raising the temperature (col. 9, lines 6-14). Claims 1-5, 8-13, 19-27, 31, 34-37 and 40-44 differ from the disclosure of Eller et al in that the method comprises the step of raising temperature of the outside air drawn in as required to lower the relative humidity of the air stream. Kitano et al disclose a temperature/humidity controller to control the temperature and humidity of the air passing through (see Abstract, col. 1, lines 55-58) via a controller (140, col. 5, lines 60-62, col. 7, lines 2-3 and lines 11-15), wherein the temperature of air is heated up to the temperature of approximately 23 degrees C (see col. 9, lines 27-29) and the relative humidity is lowered to approximately 40% (see col. 9, lines 37-40). Belding et al disclose a high temperature process air is required to

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lower the humidity of the system (see Abstract, col. 5, lines 42-53). It would have been obvious to a person having ordinary skill in the art at the time the invention was made to provide a controller of raising the temperature of the outside air drawn in as required to lower the humidity of the air stream as taught by either Kitano et al or Belding et al in the method of controlling relative humidity of an enclosed space of Eller et al since it is an effective means to remove moisture in the hot air stream passing therethrough, hence, providing cooled process air with a controlled level of humidity.

Claims 6, 14-16, 28, 29 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eller et al (5,004,483), in view of either Kitano et al (5,944,894) or Belding et al (5,660,048), and further in view of Vross et al (6,022,389).

Claims 6, 14-16, 28, 29 and 32 call for a filtering unit with multiple filtering layers including an HEPA. Vross et al disclose a filtering unit comprising an HEPA filter (48), a carbon filter (49, and a granular activated carbon filter (51) (col. 5, lines 20-34). It would have been obvious to a person having ordinary skill in the art at the time the invention was made to adopt a plurality of filtering layers including an HEPA filter as taught by Vross et al in the apparatus of Eller et al, Kitano et al and Belding et al since multiple filtering layers would enhance the filtration efficiency in removing all arrays of contaminants from the air stream passing through.

Claims 7, 17, 18, 30, 33, 38 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eller et al (5,004,483), in view of either Kitano et al (5,944,894) or Belding et al (5,660,048), and further in view of LaFerriere et al (2004/0020363 A1).

Claims 7, 17, 18, 30, 33, 38 and 39 call for an UV light to kill microorganisms in the air stream. LaFerriere et al disclose an air cleaner with multiple filtering layers (50, 70, paragraphs 0050 and 0051) with an UV light (60) where the UV light can kill microorganisms in the air stream passing through. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to provide an UV light as taught by LaFerriere et al in the filtering apparatus of Eller et al, Kitano et al and Belding et al since the UV light would sterilize the filter medium by killing microorganisms in the air passing through.

#### ***Response to Arguments***

Applicant's arguments filed on June 9, 2006 have been fully considered but they are not persuasive.

Applicant's main argument is that Eller et al do not disclose the step of "raising a temperature of the outside air drawn in as required to lower the relative humidity of the air stream, such that the relative humidity of the inside air is substantially maintained at a desired relative humidity". The Examiner newly introduces Kitano et al (5,944,894) and Belding et al (5,660,048) as the secondary references in combination with Eller et al under the 103(a) rejections to show that: Kitano et al disclose a temperature/humidity controller to control the temperature and humidity of the air passing through (see Abstract, col. 1, lines 55-58) via a controller (140, col. 5, lines 60-62, col. 7, lines 2-3 and lines 11-15), wherein the temperature of air is heated up to the temperature of approximately 23 degrees C (see col. 9, lines 27-29) and the relative humidity is lowered to approximately 40% (see col. 9, lines 37-40), as claimed. Belding et al

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disclose a high temperature process air is required to lower the humidity of the system (see Abstract, col. 5, lines 42-53), as claimed. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to provide a controller of raising the temperature of the outside air drawn in as required to lower the humidity of the air stream as taught by either Kitano et al or Belding et al in the method of controlling relative humidity of an enclosed space of Eller et al since it is an effective means to remove moisture in the hot air stream passing therethrough, hence, providing cooled process air with a controlled level of humidity.

Applicant's arguments with respect to claims 1-44 have been thoroughly considered but are moot in view of the new ground(s) of rejection, as discussed above.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Minh-Chau T. Pham whose telephone number is (571) 272-1163. The examiner can normally be reached on Mon/Tues/Thur/Fri 7:00 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on (571) 272-1166. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



**Minh-Chau Pham**  
**Patent Examiner**  
**Art Unit : 1724**  
**August 7, 2006**